# Module 6
# Regulations and Responsibilities

## Learning Objectives

By the end of this section, you will:

1. Discuss certification requirements.
2. Summarize the responsibilities of the owner, supervisor, A/D Director and operator.
3. Explain who has final responsibility for a lift.
4. Discuss who can be held liable and how.
5. Explain the importance of teamwork in a crane operation.
6. Describe the factors an operator must consider before making the final decision for any lift.

## Credentialing Requirements

### To comply with federal standards, operator requirements are specified in 29 CFR 1926.1427.

- Subpart CC - Cranes and Derricks in Construction, as specified in 29 CFR 1926.1427
- Effective November 2017.

### Both classroom and hands on training may take place.

- OSHA has addressed operator certification in the updated standard.

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1926.1427

### OSHA Accepted Certification or Licensing by a Government Entity has two parts:

1. A written examination that includes the safe operating procedures for the particular type of equipment the applicant will be operating and technical understanding of the subject matter criteria required in 1926.1427(j).
2. A practical exam showing the applicant has the skills needed to safely operate the equipment, including, among other skills, and recognize items required in the shift inspection.

# OSHA Requirements

**Under OSHA regulations the employer is responsible for following all safety rules for cranes. Specific responsibilities include:**

- The employer must comply with all manufacturer procedures applicable to the operational functions of equipment, including its use with attachments.
- Where the manufacturer procedures are unavailable, the employer must develop and ensure compliance with all procedures necessary for the safe operation of the equipment and attachments.

## *Find the definitions for the following terms:*

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1926.1417 (a)
1926.1417 (b)

» A/D director (Assembly/Disassembly director): An individual who meets this subpart's requirements for an A/D director, irrespective of the person's formal job title or whether the person is non-management or management personnel.

» Controlling entity: An employer that is a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project - its planning, quality and completion.

Subpart CC

» Dedicated spotter: Signal person qualifications must be met. Their sole responsibility is to watch the separation between the power line, equipment, load line and load, and ensuring through communication with the operator that the applicable minimum approach distance is not breached.

» Qualified evaluator (not a third party): A person employed by the signal person's employer who has demonstrated that he/she is competent in accurately assessing whether individuals meet the Qualification Requirements in this subpart for a signal person.

» Qualified evaluator (third party): An entity that, due to its independence and expertise, has demonstrated that it is competent in accurately assessing whether individuals meet the Qualification Requirements in this subpart for a signal person.

### *Can the A/D Director be a competent person or must he or she be a qualified person?*

Subpart CC

» The A/D Director, if acting alone, must be both a competent person and a qualified person. He or she can be just a competent person if assisted by one or more qualified persons.

» See the OSHA standard: 1926.1404(a)(1) Assembly/disassembly must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons ("A/D director").

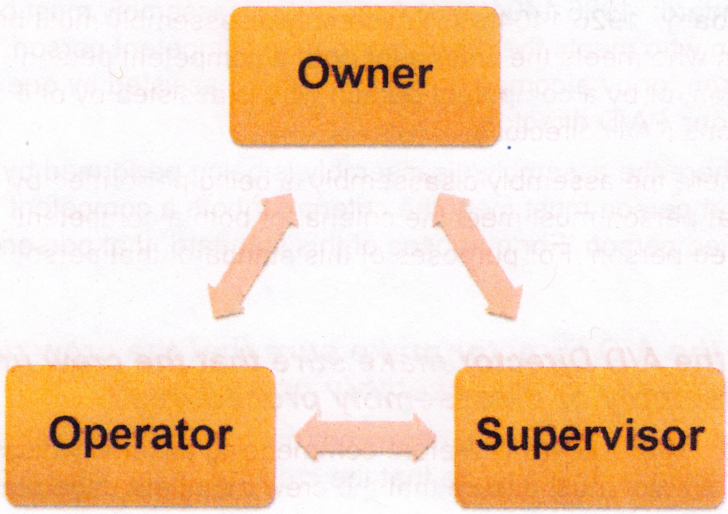
» 1926.1404(a)(2) Where the assembly/disassembly is being performed by only one person, that person must meet the criteria for both a competent person and a qualified person. For purposes of this standard, that person is considered the A/D director.

### *What items must the A/D Director make sure that the crew understands before starting assembly or disassembly procedures?*

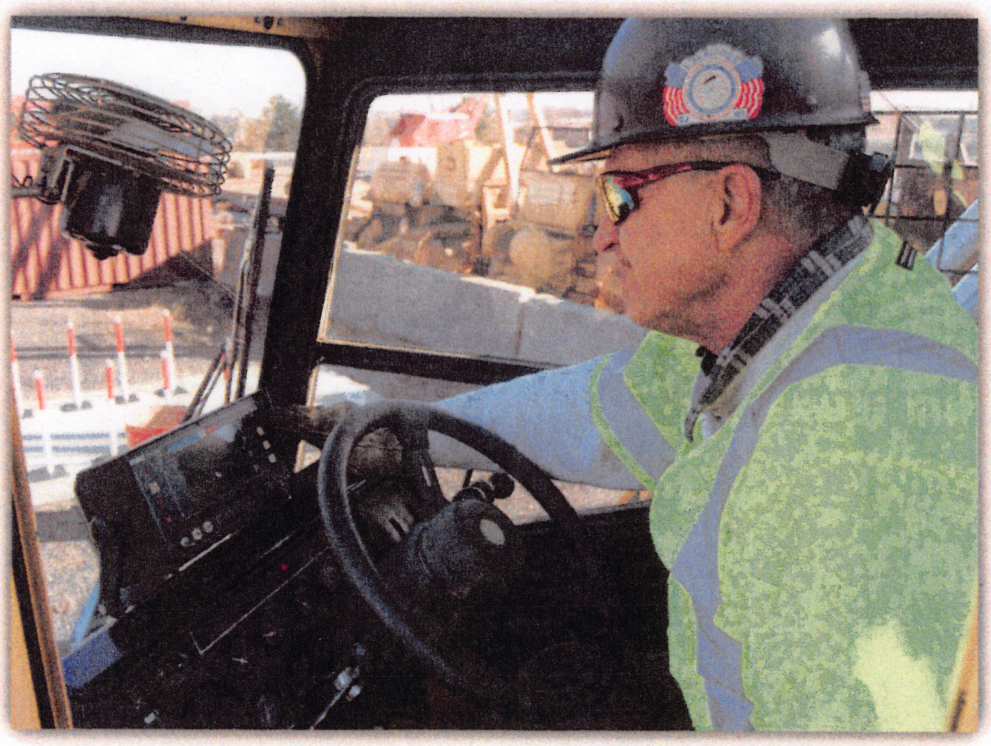
» The OSHA standard: 1926.1404(d)(1)Before commencing assembly/disassembly operations, the A/D director must ensure that the crew members understand all of the following:
- Their tasks.
- The hazards associated with their tasks.
- The hazardous positions/locations that they need to avoid.

# Responsibilities

**The owner, supervisor and operator are all responsible for safe crane operations.**




**Some responsibilities for the operation of cranes rest with management, but others rest with the crane operator.**



# Owner Responsibilities

**Crane owners are often the primary responsible party.**

**Owner's responsibilities include:**

**Owners may have to assign an operator and support crew.**

They must ensure the crane operator is well trained, experienced, and competent to operate the crane on the particular job involved. Owners must confirm that the operator is aware of the necessity of carrying out all responsibilities and that all personnel involved in maintaining, repairing, transporting, preparing, assembling and operating the crane are well trained, experienced and competent to handle their specific jobs in a safe and efficient manner.

**Crane owners have other responsibilities.**

Crane owners are responsible for on-going, high-quality training and upgrading programs for all personnel to ensure a consistently high level of competence in all phases of the operations. Owners must ensure that the workers are assigned definite, individual responsibilities and have the authority necessary to exercise those responsibilities. Finally owners ensure that a thorough crane maintenance and inspection program is established and maintained.

**Owners are responsible for site preparation and equipment maintenance.**

They must check that the client and site supervisors are aware of their responsibilities with regard to what work must be done to prepare the site for the crane operation. The site must be kept in proper condition for crane operations at all times. Owners must keep the crane and associated equipment in accordance with the manufacturer's requirements and all applicable regulations. Local and federal regulations also govern the maintenance of crane equipment.

# Site Supervisor Responsibilities

## The site supervisor has overall responsibility for the lift and must plan all phases of the operation.

The site supervisor is responsible for all work involving the crane.

They are responsible for determining a correct load weight and radius and informing the operator. Their responsibilities also include supervising the rigging crew and ensuring that is experienced and competent. Supervisors must be capable of establishing weights; judging distances, heights and clearances; selecting tackle and lifting gear suitable for the loads; and rigging the load safely and securely.

The supervisor must designate the signal persons and identify them to the operator. Supervisors must confirm that the signal person is competent and capable of directing the crane and the load to ensure the safety and efficiency of the operation. They must be capable of directing the crane and the load. Their responsibilities also include ensuring the safety of the rigging crew and all other personnel affected by the rigging operation and keeping the public and all non-essential personnel clear of the crane during operation.

The site supervisor must control the movements of all personnel within the area affected by the lift. They should not assume that everyone is aware of crane and load movement. Ensuring that all safety precautions are taken when the lift is in the vicinity of power lines is another supervisor responsibility. They must always be alert. Supervisors must ensure that at all personnel involved in the operation understand their jobs, responsibilities, and safety-related aspects of the operation. Everyone must be constantly informed and aware of their duties.

## Case Study

On November 3, 2004, a 44 year-old laborer (the victim) was fatally injured after being electrocuted through indirect contact with a 7,200 volt overhead power line. A boom truck with an auger attachment was turning a utility pole anchor in an anchor-setting process in preparation for a utility pole replacement. During the process, the anchor began to wobble and the extended boom contacted the overhead power line. Apparently unaware that the boom was in contact with the overhead power line, the victim grabbed the energized anchor with both hands in an attempt to stabilize it and remained in contact with the energized anchor until the boom was moved away from the power line. Electrical current moved through the victim's body from his hands to ground through his feet. The boom truck operator immediately called 911 on his cell phone and emergency medical services (EMS) arrived in about 4 minutes. CPR was immediately initiated and the victim was transported to the hospital where he was pronounced dead.

# Operator Responsibilities

**The operator is responsible for the safety of the crane and the lift as soon as the load leaves the ground.**

**The operator can be held responsible for an incident or situation if they knew the operation was unsafe.**

- Whenever there is a concern as to safety, the operator must have the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.

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- The operator must report unsafe conditions to the supervisor. Whenever there is reasonable cause to believe that the lift might be dangerous or unsafe, the crane operator must refuse to lift until the concern has been reported to the supervisor, any and all hazards are fixed and safe conditions are assured.

- The operator must understand crane functions, idiosyncrasies, and limitations as well as a crane's operating characteristics. They must be familiar with the crane's load chart and know the meaning of all notes and warnings. They must be able to calculate or determine the crane's actual net capacity for every possible configuration of the machine and be able to inspect and maintain the crane regularly as prescribed by both the owner and the manufacturer.

- The operator must inform the owner of any problems with the crane including needed maintenance, or necessary repairs to the crane. These should be recorded in the crane's logbook. Operators should record in the log book the details of all inspections, maintenance and repairs done to the crane. Operators should be responsible for the supervision and training of crane operator apprentices. They must also be aware of any site conditions that could affect the crane operation and in particular the presence of power lines.

- The operator must check that the site is adequately prepared for crane operations. They must review the planned operation and requirements with the site supervisors, find out the load and rigging weight, and determine where the load is to be placed. The operator should only make the lift when assured that the weight can be lifted safely. Operators are not responsible for determining the weight of the load. However, if the operator does so, or if he/she lifts without checking the weight with the supervisor, then he/she becomes totally responsible for the lift and any resulting consequences.

- The operator must determine the number of parts of line required, check the load chart to ensure that the crane has sufficient net capacity for every lift, and select the best boom, jib and crane configuration to suit the load, site and lift conditions. They must assemble, set up and rig the crane properly, following the manufacturer's operating instructions in accordance with the load chart. They must consider all factors that might reduce crane capacity and adjust the lift operations accordingly.

- The operator must know basic load rigging procedures and ensure compliance. They shall maintain communication with signal persons and ensure that all personnel around the lift site are in a safe place during operation. They are responsible for operating and moving the crane in a smooth, controlled, and safe manner. They must shut down and secure the crane properly when leaving it unattended.

## The person directing the lift must consider:

1. Complexity of the lift.
2. Capabilities of the particular crane.
3. Experience and skill of the operator and signal person.
4. Ability to communicate the necessary signals.

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SETTING THE STANDARD
B30.5-3.3.5(e)

## The operator has the final decision for any lift.

The lift should only be made when the operator is satisfied that all factors pertaining to the lift have been considered and calculated.